

What is claimed is:

1. A substrate for a liquid crystal display comprising:  
a passivation film formed between a pixel electrode formed in each of a plurality of pixel regions and a switching element for driving the pixel electrode; and

a color filter layer formed on the passivation film;  
wherein the passivation film has a multi-layer structure constituted by a silicon nitride layer and a silicon oxide layer or a silicon oxynitride layer and wherein the silicon oxide layer or the silicon oxynitride layer is formed in contact with the color filter layer.

2. A substrate for a liquid crystal display according to claim 1, wherein the silicon oxide layer or the silicon oxynitride layer has a thickness of 3 nm or more and 20 nm or less.

3. A substrate for a liquid crystal display according to claim 1, wherein the silicon nitride layer has a structure in which layers of two or more silicon nitrides having different compositions of silicon atoms and nitrogen atoms are stacked on one another.

4. A substrate for a liquid crystal display according to claim 1, wherein the silicon nitride layer is formed such that a region of the layer has a higher density of silicon atoms, the closer the region to the silicon oxide layer or the silicon oxynitride layer in contact with the color filter layer or such

that a region of the layer has a higher density of hydrogen atoms bonded with silicon atoms, the closer the region to the silicon oxide layer or the silicon oxynitride layer in contact with the color filter.

5. A liquid crystal display comprising:

a base substrate having a passivation film formed between a pixel electrode formed in each of a plurality of pixel regions and a switching element for driving the pixel electrode and a color filter layer formed on the passivation film;

an opposite substrate provided opposite to the base substrate for a liquid crystal display; and

a liquid crystal layer sandwiched between the base substrate and the opposite substrate;

wherein the passivation film of the base substrate has a multi-layer structure constituted by a silicon nitride layer and a silicon oxide layer or a silicon oxynitride layer and wherein the silicon oxide layer or the silicon oxynitride layer is formed in contact with the color filter layer.

6. A substrate for a liquid crystal display, comprising:

an insulated substrate provided opposite to an opposite substrate with a liquid crystal layer sandwiched therebetween;

a display area provided on the insulated substrate and including a plurality of pixel regions in which a switching element, a silicon nitride layer and a silicon oxide layer or a silicon oxynitride layer, a resin color filter layer and a pixel electrode are formed in the order listed; and

an overcoat layer made of an insulating resin material formed between the resin color filter layer and the pixel electrode in the display area, wherein a relationship expressed by "the resin color filter layer > the overcoat layer  $\geq$  the silicon oxide layer or the silicon oxynitride layer  $\geq$  the silicon nitride layer" is satisfied in terms of the sizes of opening sectional areas of openings of a contact hole in the respective layers located above the switching element.

7. A substrate for a liquid crystal display, comprising:  
a switching element formed in a pixel region;  
a resin color filter layer formed in the pixel region;  
a pixel electrode formed on the resin color filter layer;  
and

a contact hole formed through the resin color filter layer to electrically connect the switching element and the pixel electrode, and the contour of the bottom of the contact hole having different length in longitudinal and transverse directions thereof and having round corners.

8. A substrate for a liquid crystal display according to claim 7, wherein the ratio between a major axis and a minor axis of the contour of the bottom (ratio between major and minor axial lengths = minor axial length/major axial length) is 0.5 or less.

9. A substrate for a liquid crystal display according to claim 7, wherein the area inside the contour of the bottom is  $600 \mu\text{m}^2$  or less.

10. A substrate for a liquid crystal display, comprising:  
a switching element formed in a pixel region;  
a resin color filter layer formed in the pixel region;  
a pixel electrode formed on the resin color filter layer;

and

a contact groove formed through the resin color filter layer with a bottom contour for electrically connecting the switching element and the pixel electrode.

11. A substrate for a liquid crystal display according to claim 10, comprising:

a storage capacitor bus line extending across the pixel region, wherein the contour of the bottom of the contact groove is formed above the storage capacitor bus line and is narrower than the width of the storage capacitor bus line.

12. A substrate for a liquid crystal display according to claim 10, wherein the contact groove divides the resin color filter layer in the pixel region.

13. A substrate for a liquid crystal display according to claim 7, wherein an opening area inside the contour of the bottom varies depending on the position where the resin color filter layer is provided.

14. A substrate for a liquid crystal display according to claim 13, wherein the opening area inside the contour of the

bottom is different for each color of the resin color filter layer.

15. A substrate for a liquid crystal display according to claim 7, wherein the resin color filter layer is formed from a negative type photosensitive material.

16. A liquid crystal display comprising:

a base substrate having a pixel electrode formed in each pixel region, a switching element for driving the pixel electrode, and a color filter layer formed between the switching element and the pixel electrode;

an opposite substrate provided opposite to the base substrate; and

a liquid crystal layer sandwiched between the base substrate and the opposite substrate, wherein a substrate for a liquid crystal display according to claim 7 is used as the base substrate.